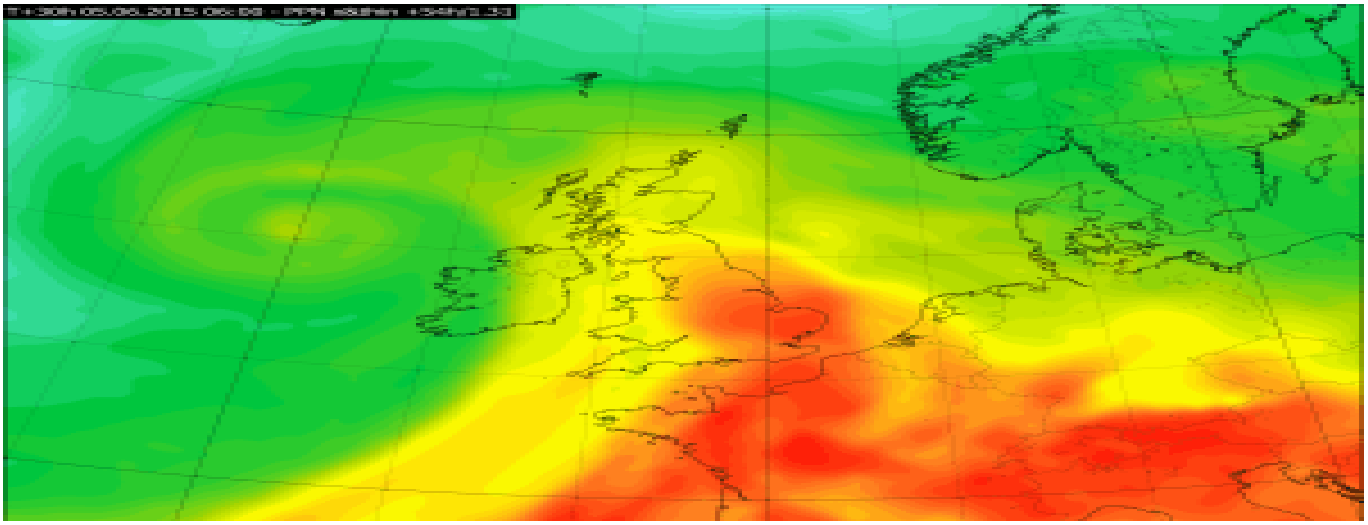
# Summer returns but no heatwave

## Description

There have been some stories in the press that a heatwave is on the way later this week.  Although we are expecting temperatures to rise over the coming days with some pleasant early summer weather, any very warm weather will be fairly short-lived.

After an unseasonably cold, wet and windy start to June and the meteorological summer, high pressure is expected to build across southern parts of the UK from Wednesday, resulting in a much quieter and more pleasant spell of weather.

By Friday, a plume of hot air from the continent could bring temperatures in the mid 20s°C  across south eastern parts of the country, but this in turn is likely to trigger some thundery showers. So although temperatures are likely to peak on Friday, this may not necessarily be accompanied by blue skies and sunshine, as a good deal of cloud is possible along with rather humid and hazy conditions.



Deputy Chief Meteorologist Martin Young said “although things will be a good deal warmer than of late, there still remains considerable uncertainty about how hot it will be and exactly where will see the highest temperatures on Friday, and the public should keep in touch with the latest forecasts”.

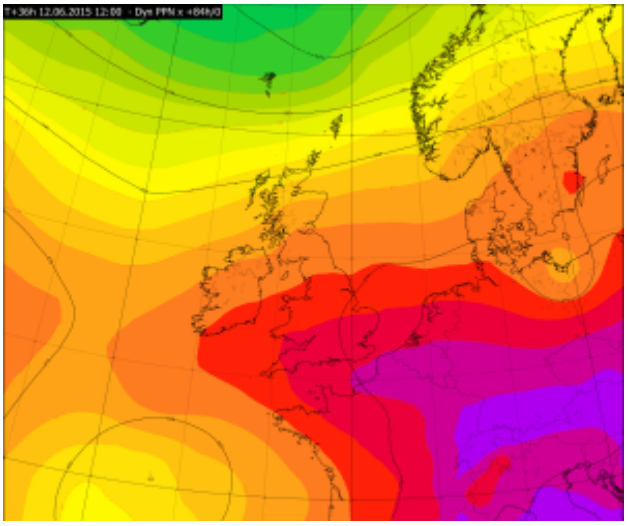
This coming weekend is likely to see temperatures a little lower than Friday’s in the south east, but plenty of pleasantly warm sunshine is expected across much of the UK with temperatures widely in the high teens, and reaching the low 20s°C  in parts of the south.

**Date Created**
June 2015

# A brief spell of heat and thunderstorms

## Description

Southern parts of the UK can expect some very warm and humid conditions on Friday, along with an increasing risk of some heavy, thundery showers.

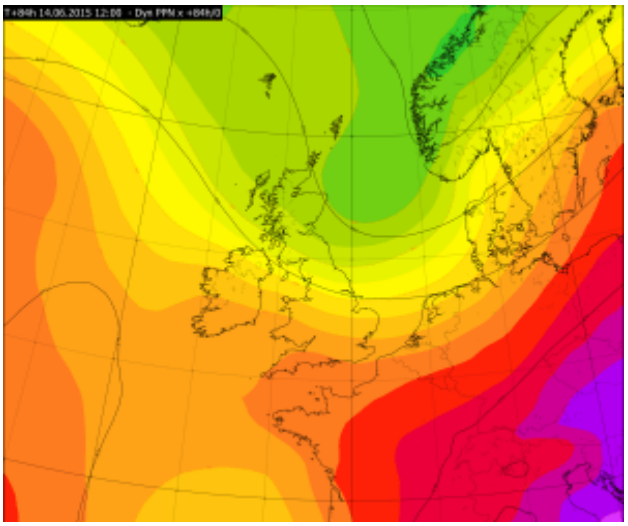


Partial thickness values from the Met Office Global Model for 1200Z Friday 12 June

Isolated thunderstorms are possible from Thursday, but they will become more likely and potentially more severe by Friday afternoon, with some locally torrential downpours possible, especially for parts of southeast England. A yellow warning has been issued for heavy rain. There is the potential for large amounts of rain is a short space of time, and this could lead to surface water flooding, but as is the case with showers, some places will stay dry. We are also likely to see frequent lightning, and hail is possible in places – as we saw last Friday.

Away from the south, there will be sunshine for many, though it will be cloudier with a little light rain in the far north.

Into the weekend, temperatures will take a tumble across much of the country. Saturday will see a band of rain across central areas, with occasional brighter spells either side. The rain will become increasingly light and patchy by Sunday with drier conditions developing for many. It will feel noticeably cooler though, with the return of some chilly nights.



Partial thickness values from the Met Office Global Model for 1200Z Sunday 14 June

With many people out and about at this time of year including at the Isle of Wight and Download festivals, we should be prepared for all types of weather over the next few days, from humid to cool and from rain to shine.

**Date Created**
June 2015

# New cloud comes a step closer

## Description

Newly discovered cloud Asperitas (Latin for roughness) has taken another step towards being officially recognized and named in the International Cloud Atlas.

The cloud has been named Asperitas because it looks like rough or turbulent seas and has been put forward for inclusion in the Atlas by the UK Cloud Appreciation Society.

Gavin Pretor-Pinney, founder of the Cloud Appreciation Society said “It’s really exciting to see Asperitas that bit closer to becoming official. It’s great that the general public and amateur observations have influenced the atlas, it feels very democratic. The internet has resulted in increased connectivity, these days everyone has a camera at their fingertips, and this has resulted overwhelming evidence for this new type of cloud”.

The World Meteorological Organization (WMO) is currently updating the International Cloud Atlas, first published in 1896, and has now presented details of the new cloud to the World Meteorological Congress.

The WMO are making the Atlas more user-friendly and accessible and expect to publish the new edition next year. It is also expected to include the new cloud species Volutus (Latin for rolled), as well as some new “special clouds” like Homogenitus (from the Latin homo meaning man, and genitus meaning generated or made).

Met Office Meteorologist and Royal Meteorological Society George Anderson is heavily involved in updating the Atlas and said “Science, technology and photography have moved on in the past 40 years, so there is a need to update the Cloud Atlas”.

Met Office Scientist, Graeme Anderson, completed a dissertation on Asperitas, for his Masters degree at the University of Reading. He said “The challenge with this particular cloud formation is its rarity. It is very difficult to get good measurement data from this type of cloud if you don’t know when or where it will appear, or how long it will last. It became clear to me that these cloud formations did not fit into the

existing classifications. It's good to see this update taking place to make the International Cloud Atlas fully comprehensive."

A scanned version of both volumes of the Atlas is available on the WMO website. You can use the Met Office cloud spotting guide to help you identify different types of clouds, this can be a fun activity to try with children.

**Date Created**
June 2015

# Mixed bag for the start of June

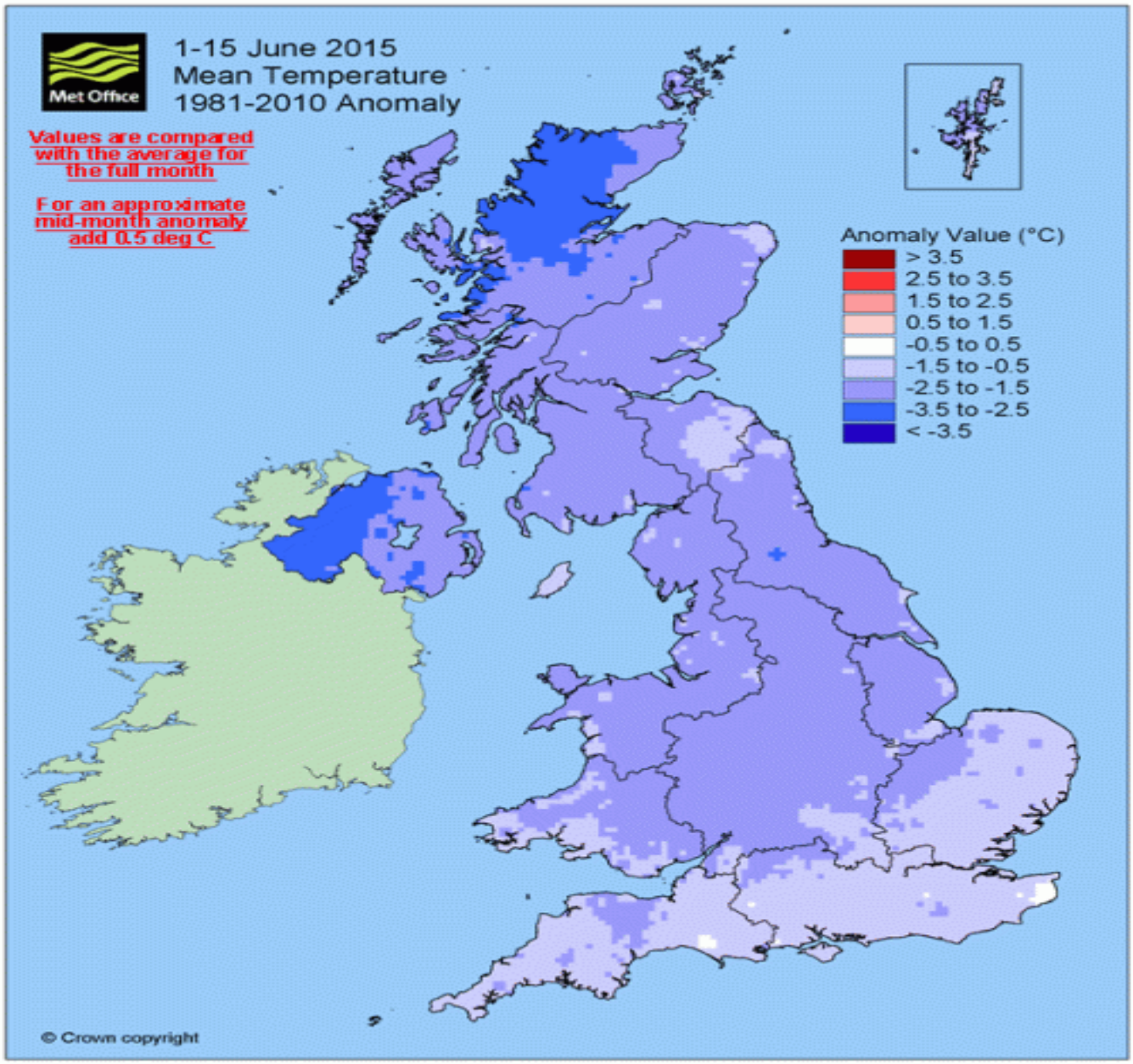
## Description

It has been a very varied weather picture so far this month.

It’s been dry and warm for the south east of the UK, with some places around London having received less than 5 mm of rainfall so far and areas such as Essex, Hertfordshire, Suffolk and Cambridgeshire receiving less than 20% of the month’s average in places.

This year’s highest UK temperature so far, 26.8 °C, occurred at Kew Gardens (Greater London) on the 12 June.

Much of the rest of the UK has seen temperatures in general noticeably below average for June, continuing on from the rather cool May.  While rainfall totals are already close to the whole-month average in the central Scottish Highlands and in Nottinghamshire.




June began with two very unseasonal days, due to a deep low-pressure system to the west of the UK, bringing large amounts of rain and some strong winds to the UK, particularly southern areas. Apart from this, and some showery rain on the 5th/6th,

June so far has been relatively settled, especially over southern areas, although we saw a period of thundery outbreaks on 12th June affecting mainly southern areas due to a plume of very humid and warm unstable air moving in from France/Spain.

Mean temperatures for the UK so far this month have been 2 °C below normal in most areas, but colder in the far north-west of the UK and a little closer to normal in southern England. While the minimum temperatures have been well below average, by as much as 3 °C over some northern areas.

| | mean temperature | | sunshine duration | | rainfall | |
|---|---|---|---|---|---|---|
| **1-15 June 2015** | **Act (°C)** | **Diff from avg (°C)** | **Act (hrs)** | **% of avg** | **Act (mm)** | **% of avg** |
| UK | 11.2 | -1.8 | 117.6 | 69 | 31.3 | 43 |
| England | 12.5 | -1.6 | 128.3 | 70 | 23.1 | 37 |
| Wales | 11.6 | -1.6 | 121.6 | 70 | 41.8 | 49 |
| Scotland | 9.3 | -2.0 | 99.3 | 66 | 43.9 | 49 |
| N Ireland | 10.3 | -2.5 | 114.3 | 76 | 21.4 | 28 |

We would expect figures to be around 50% of the average figures by the mid month point.

For the latest weather forecast go to www.metoffice.gov.uk/weather

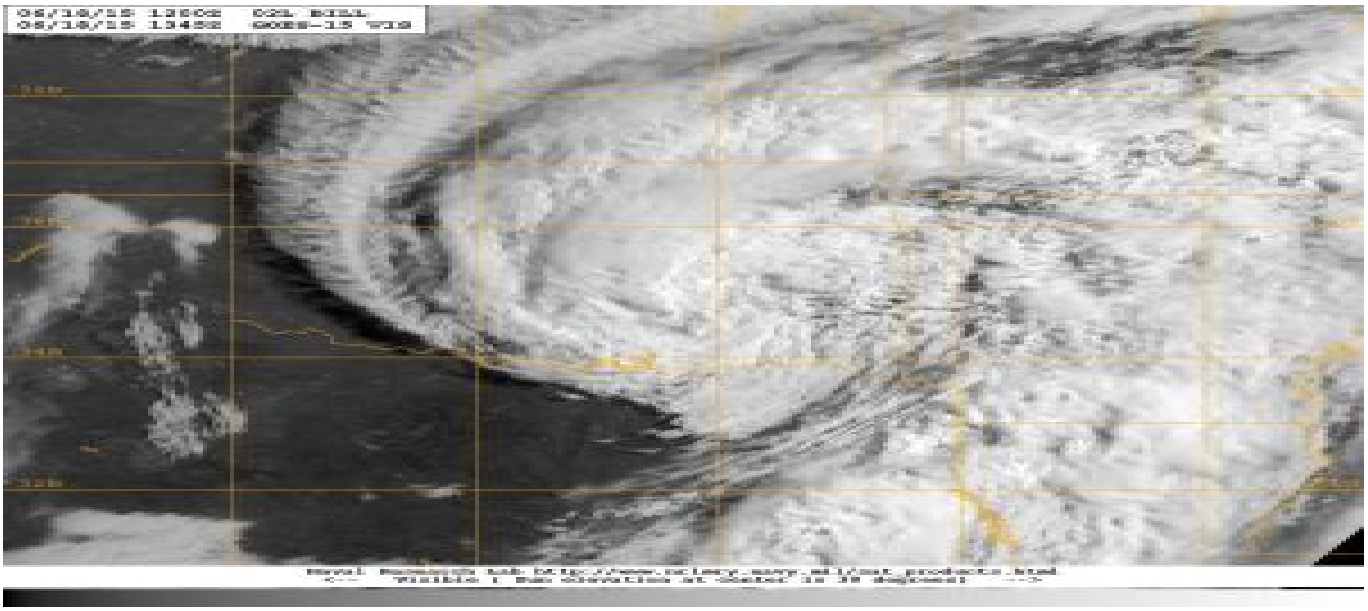
**Date Created**
June 2015

# Tropical Depression Bill continues to bring heavy rain to parts of the US

## Description

The second named tropical storm of the north Atlantic hurricane season, Bill, has been making headlines this week after it made landfall in the US on Tuesday night.

Bill arrived southeast of Houston, Texas where it weakened into a tropical depression as it moved inland. It didn't weaken as quickly as might normally be expected and this was due to Brown Ocean Effect.



Tropical storms or cyclones tend to get their energy from warm sea water, and weaken once they move across land. However, given the time of year, the ground has warmed significantly across southern states, and the ground is saturated following a recent record wet May. This means that there is enough heat and moisture available to mimic the ocean, hence the name Brown Ocean Effect. The effect is boosting Bill as forecast, and enabling it to dump phenomenal amounts of rain across parts of Texas and Oklahoma.

Radar image of Tropical Depression Bill on 17 June

Tropical Depression Bill brought 70 to 80mm of rain across parts of southern Texas on Wednesday, with many rivers in the region flowing at high levels after recent heavy rainfall. Thursday could see more than 100mm for parts of Oklahoma and Arkansas, potentially leading to some flash flooding. The remnants of the storm are then expected to continue north-eastwards towards the south of the Great Lakes, moving offshore again close to New York.

By the time the remnants of Bill cross the Atlantic towards the UK, it will be indistinguishable from any normal low pressure we'd expect to see at this time of year.

It's too early to say what impact, if any, Bill would have on the UK – but we wouldn't expect any possible impacts to be anything out of the ordinary for UK summer weather.

**Date Created**
June 2015

# Met Office staff and affiliates recognised for their work

## Description

World renowned Met Office Chief Scientist Professor Dame Julia Slingo DBE FRS has been awarded the prestigious International Meteorological Organisation (IMO) Prize.

This is the first time, since 1998 that the annual prize, awarded by the World Meteorological Organisation, has been presented to a UK scientist and it is an acknowledgement of her lifetime contribution to world meteorology.

Julia said: “I am very surprised but rather delighted to be recognised by all my meteorological colleagues around the world.  The prize giving will be next June in Geneva where I also have to give a lecture.”

**Queen’s Birthday Honours List**

Meanwhile three men who collaborate with or support the Met Office have been recognised in this year’s Queen’s Birthday Honours List.

Dr Kamal Puri, from the Australian Bureau of Meteorology has been awarded a Public Service Medal (PSM) in the Queen’s Birthday Honours List.  The PSM recognises outstanding service by employees of the Australian Government and state.

Kamal has worked in numerical weather prediction and earth system modelling in the Bureau for the

last four decades. He is a Met Office Science Advisory Council member and has played a key role in development of our Unified Model partnership. In 2007 he helped develop the Australian Community Climate and Earth System Simulator (ACCESS) which has directly contributed to advanced warnings of hazards such as fires, heatwaves, floods and cyclones, saving many lives.

DR Rob Vertessy, Director of Meteorology and CEO at the Australian Bureau of Meteorology said: “Kamal’s leadership has enhanced the reputation and standing of Australian weather and climate modelling in national and international circles, and I am sure that you will all agree this award is well-deserved recognition for an exemplary leader and ambassador for the Australian Public Service and the Bureau of Meteorology”.

90 year old Voluntary Weather Observer, Donald Grant, has been awarded the British Empire Medal (BEM) for services to Meteorology after supplying weather readings to the Met Office for the past 30 years from his weather station in Dunbar, East Lothian.

Finally Professor Chris Budd from the University of Bath has been awarded an OBE for services to science and maths education.  He works closely with the Met Office helping improve weather forecasting accuracy and he co-founded an international network bringing together mathematicians working in climate change with policy-makers.

**Date Created**
June 2015

# Large solar storm brings spectacular views of the aurora

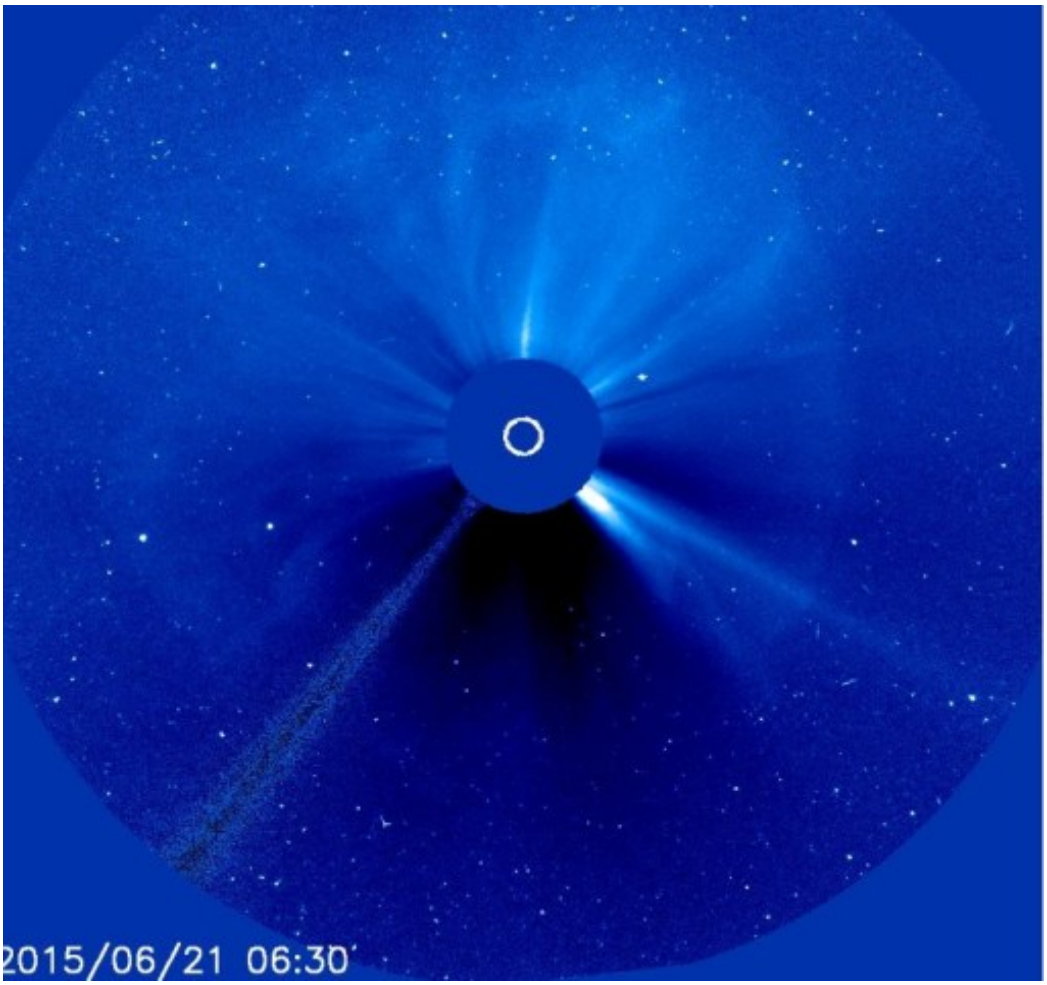
## Description

**Updated 24 June 2015**

The Space Weather team at the Met Office has been keeping a close eye on solar activity over recent days. A large solar storm resulted in the northern lights being seen as far south as Dorset and Bournemouth on Monday night.

Taken by Richard Cliff on Exmoor

A particularly active sunspot came into view during the early part of last week. This sunspot continued to grow in complexity which has resulted in a number of moderate solar flares and coronal mass ejections (CMEs) which is when the Sun ejects some of its atmosphere out into space. This can be seen on the image below as a faint circle, almost like smoke. These travel at speeds of around 2 million mph. On Sunday one such CME was launched directly at Earth. Travelling at these speeds it still took almost two days to travel the 93 million miles from the Sun to Earth. When it hit Earths magnetic field it caused a Severe Geomagnetic Storm (A G4 storm on a scale of 1 to 5). It was this which caused the Aurora to appear in the skies of southern England on Monday night.



CME from 21 June visible as a faint circle

Large geomagnetic storms can result in disruption to power grids, which is why it is important that these storms are monitored and warned for, although fortunately the UK grid is more resilient to space weather than the grids in many other countries. There are no impacts on human health as a result of these solar storms, in fact they can have some very welcome effects in the form of increased aurora, both in effect and extent.

Our Space Weather advisors are now watching another CME, which looks like it could be heading our way. This has the potential to bring another night of spectacular aurora views on Wednesday night. To see the northern lights, wait until at least half an hour after sunset, go outside away from artificial lights, let your eyes accustom to the dark and look towards the north. There will be some cloud around tonight, check out our cloud cover forecast for more information.

**Date Created**
June 2015

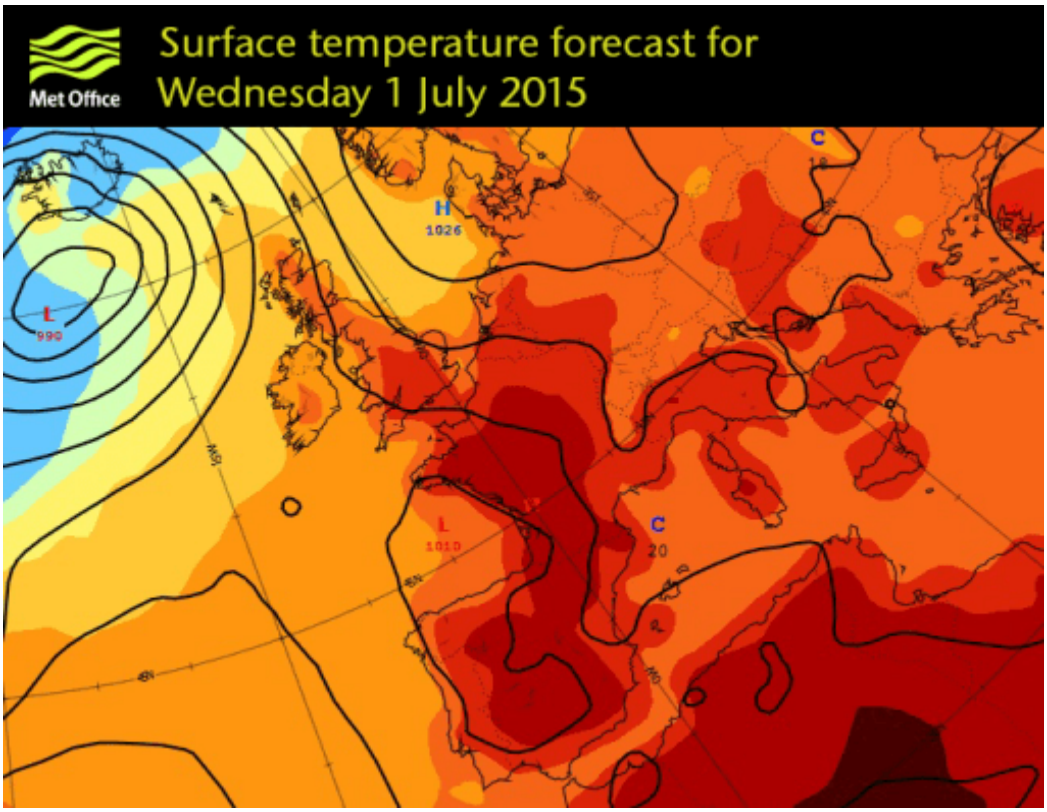
# Hotter weather for the start of July

## Description

The weather is showing signs of heating up next week for the start of the Wimbledon fortnight.

In contrast to June so far, which has seen temperatures often near or just below normal, next week could see a real change in the way it feels – with hot days and humid nights, especially across the south.

It looks like heat will start to build across Iberia later this weekend and spread northwards across France early next week as a tropical continental airmass begins to dominate the weather. Temperatures across Iberia and southern France could reach the low 40's Celsius by midweek with northern France seeing temperatures into the mid to high 30s Celsius.



Data: European Centre for Medium Range Weather Forecasts

The UK is likely to be near the boundary between this tropical continental airmass and a tropical maritime airmass over the Atlantic, but we do expect to see temperatures rise across the whole of the UK for the start of July.

Scotland could see highs in the low to mid 20's (although it may be cloudy here at times), and highs across southern Britain are likely to reach the low 30's Celsius with a small chance of values in the mid

30’s here.

It’s worth saying that there is some uncertainty about how much of the hot weather from the continent will reach us, and it may only last a couple of days before temperatures drop a little. As is traditional with hot weather in the UK in the summer it may end with thunderstorms.

**Date Created**
June 2015